

## Claims

1. Burner with a burner head and gas supply channels that are located in the burner head, characterized in that the burner head, at least in the area of the exit ends of the gas supply channels, consists of an aluminum-containing material.

2. Burner according to claim 1, wherein the material is coated with aluminum or an aluminum alloy.

3. Burner according to claim 1, wherein the material is alloyed with aluminum.

4. Burner according to claim 3, wherein the material consists of an oxide dispersion-hardened superalloy (ODS material).

5. Burner according to one of claims 1 to 4, wherein in at least one of the gas supply channels, there is a vane that stabilizes the gas flow.

6. Burner according to claim 5, wherein the vane is set back relative to the exit ends of the gas supply channels.

7. Burner according to one of claims 5 or 6, wherein the incline of the vane is adjustable.

8. Burner according to one of claims 1 to 7, wherein the gas supply channels are made from gas supply tubes that are arranged coaxially to one another.

9. Burner according to one of claims 1 to 8, wherein there are means for producing a swirl flow in the gas supply channels.

10. Burner according to claim 9, wherein the means for producing a swirl have flow channels that are tilted tangentially against the direction of flow.

11. Burner according to one of claims 9 or 10, wherein the means for producing a swirl in the gas supply channels are adjustable in order to produce swirl flows of varied intensity.

12. Burner according to one of claims 1 to 11, wherein in the outside area, the burner has means for cooling by a vapor flow.

13. Burner according to one of claims 1 to 12, wherein the burner is shielded against heat radiation toward the combustion chamber side by a diffusor.

14. Burner according to one of claims 1 to 13, wherein the burner is shielded against heat radiation toward the combustion chamber side by cylindrical tubular insulation.